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# Patent [19]

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## [54] DEVICE FOR DECOMPOSING ORGANIC CHLORINE COMPOUND IN WATER

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### [57] ABSTRACT

PURPOSE: To more efficiently make the water contaminated with org. chlorine compd. harmless by forming a quartz branch pipe for an exhaust behind a photocatalyst column.

CONSTITUTION: A synthetic quartz branch pipe 6 provided with a gas-liq. separation filter 7 at its root is set on the upstream side of a treating pipe 1 on the downstream side of a semiconductor photocatalyst-packed column 3. The treating pipe 1 on the left and right sides of the joint of the branch pipe 1 is inclined upward toward the joint of the branch pipe 6, and the oxygen bubble generated in the column 3 is collected at the joint of the branch pipe 6 by the water current and inclination. The gas consisting essentially of the oxygen contg. the vapor of the undecomposed org. chlorine compd. is introduced into the branch pipe 6 through the filter 7. UV from a UV lamp 4 is directly projected, the hydroxyl free radical generated by the oxygen itself reacts intricately with the chlorine free radical, etc., from the org. chlorine compd., and the org. chlorine compd. is completely decomposed.

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